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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Timothy P. Galante
Serial No.: 10/577,871
Filed: 04/28/2006
Group Art Unit: 3654
Examiner: Pico, Eric E.
Title: ELEVATOR DOOR OPERATOR AND INTERLOCK
ARRANGEMENT

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellant now submits its brief in this appeal. A Credit Card Payment Form in the amount of \$540.00 is submitted. The Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees or credit the account for any overpayment.

Real Party in Interest

The real party in interest is Otis Elevator Company. Otis Elevator Company is a business unit of United Technologies Corporation.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of the Claims

Claims 1-16 are pending and on appeal.

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Claims 1-3, 6-10 and 13-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 1,203,364 (the *Kurimoto* reference) in view of U.S. Patent No. 3,315,767 (the *Walter* reference).

Claims 4, 5, 11 and 12 stand rejected under 35 U.S.C. §103 as being unpatentable over the *Kurimoto* reference in view of the *Walter* reference and further in view of U.S. Patent No. 4,893,435 (the *Shalit* reference).

Status of Amendments

There are no unentered amendments.

Summary of Claimed Subject Matter

There are two independent claims on appeal. Claims 1 and 8 are reproduced below including references to the drawings and specification to show how the claims read on one example embodiment.

1. An elevator car assembly (Fig. 1, 20; page 3, line 6), comprising
a frame (Fig. 1, 24; page 3, line 7);
at least one cabin door supported for guided movement relative to the frame (Fig. 1, 26; page 3, lines 10-12);
a door mover for moving the cabin door between open and closed positions, the door mover being supported by the frame near a lower edge of the cabin door (Fig. 1, 40; page 3, lines 13-17); and
an interlock for simultaneously moving a corresponding hoistway entrance door with the cabin door, the interlock being positioned near the lower edge of the cabin door (Fig. 1, 42; page 3, lines 16-17).
8. An elevator door assembly, comprising:
a car frame having a rail and a sill (Fig. 1, 24, 30, 34; page 3, lines 6-12);
at least one car door supported for movement along the rail and the sill between an open and a closed position (Fig. 1, 26; page 3, lines 7-9);
a door mover supported near a lower edge of the car door (Fig. 1, 40; page 3, lines 13-14);
an entrance door frame having a header and a sill that are adapted to be supported in a fixed position near an opening to a hoistway (Fig. 6, page 70, 72, 78; page 4, lines 25-28);

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at least one hoistway door supported for movement relative to the header and door frame sill between open and closed positions (Fig. 6, 66; page 4, lines 20-22); and

an interlock that couples the car door to the hoistway door such that the car door and the hoistway door move together responsive to the door mover, the interlock being supported near the door mover (Fig. 5, 42, 80, 82; page 3, lines 13-21; page 4, line 29 – page 5, line 5).

Grounds of Rejection to be Reviewed on Appeal

Claims 1-3, 6-10 and 13-16 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 1,203,364 (the *Kurimoto* reference) in view of U.S. Patent No. 3,315,767 (the *Walter* reference).

Claims 4, 5, 11 and 12 stand rejected under 35 U.S.C. §103 as being unpatentable over the *Kurimoto* reference in view of the *Walter* reference and further in view of U.S. Patent No. 4,893,435 (the *Shalit* reference).

ARGUMENT

There is no *prima facie* case of obviousness against any of Appellant's claims.

The rejection under 35 U.S.C. §103 of claims 1-3, 6-10 and 13-16 based upon the proposed combination of *Kurimoto* and *Walter* must be reversed.

There is no *prima facie* case of obviousness for several reasons.

First, the Examiner is not correctly interpreting the *Kurimoto* reference. When rejecting independent claims 1 and 8, the Examiner contends that the element labeled 18' in *Kurimoto* is an elevator car door. Appellants respectfully disagree. There is nothing in the *Kurimoto* reference that indicates that the element labeled 18', which is not described in the specification of *Kurimoto*, is an elevator car door. The only door (or door panels) described in the *Kurimoto* reference are the "doors of the elevator shaft which when closed form part of the wall of the shaft" indicated by numerals 1, 2 and 2' in the *Kurimoto* reference. (Page 1, lines 66-68) There

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is nothing in the *Kurimoto* reference to indicate that the element labeled 18' is anything other than a wall of the car frame and there is no indication that it is a door.

The Examiner points to column 4, line 85 but that portion of the reference is describing the shaft doors, which are not elevator car doors.

Even if a reasonable interpretation were that the element 18' is a door, there is nothing that allows for the interpretation of the motor 19 being a door mover for moving the element 18'. There is nothing within the *Kurimoto* reference that in any way indicates that the motor 19 has any effect on any hypothetical movement of the undescribed element labeled 18'. Therefore, even if the Examiner were correct that the element 18' is a cabin door, the motor 19 does not correspond to a door mover for moving a cabin door. The Examiner does not even contend that the motor 19 moves the element 18' but instead acknowledges that the motor 19 is used only for moving the doors of the elevator shaft 1, 2, 2'.

Therefore, even if the Examiner's proposed combination of the *Kurimoto* and *Walter* references could be made, there is no *prima facie* case of obviousness because there is nothing within that combination that corresponds to a door mover for moving the undescribed element 18' (i.e., the Examiner's "car door") in the *Kurimoto* reference. Without that, it is impossible to establish a *prima facie* case of obviousness.

Another element that is missing from the proposed combination used to reject independent claims 1 and 8 is an interlock near a lower edge of the door. The Examiner points to the *Walter* reference as teaching an interlock C for simultaneously moving an elevator car door and a hoistway door. The interlock C of the *Walter* reference, however, is near a top of the corresponding doors in that reference. Neither of the references teach an interlock as recited in Appellant's claims, which requires the interlock to be near a lower edge of the door. Therefore,

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there is no *prima facie* case of obviousness because the proposed combination does not provide a result that is consistent with Appellant's claimed arrangement.

Additionally, the proposed combination cannot be made. MPEP 2143.01(VI) indicates that a proposed modification or combination of prior art that would change the principle of operation of the prior art being modified is not sufficient to establish a *prima facie* case of obviousness. In this instance, the Examiner's proposed combination would change the principle of operation of the *Kurimoto* reference. That reference uses a motor 19 and a manually moveable lever to engage the shaft of the motor 19 with the chain mechanism for moving the shaft door. The principle of operation of the *Kurimoto* reference is to have a person inside the elevator car manipulate the handle 24c to cause selective movement of the shaft doors 1, 2 and 2' between open and closed positions.

If one were to attempt to substitute in the clutch mechanism C of the *Walter* reference to provide some engagement between a hypothetical cabin door 18' and the shaft door 1 in the *Kurimoto* reference for purposes of having a car door mover cause movement of the shaft doors 1, 2, 2', that would change the principle of operation of that reference. Therefore, the Examiner's proposed combination cannot be made.

Regardless of how one interprets the undescribed element 18' in the *Kurimoto* reference, the proposed combination of that reference with the *Walter* reference does not establish a *prima facie* case of obviousness with respect to independent claims 1 and 8. Moreover, as claims 2, 3, 6, 7 and 16 depend from claim 1 and as claims 9, 10, and 13-15 depend from claim 8, the proposed combination of *Kurimoto* and *Walter* also fails to establish a *prima facie* case of obviousness with respect to each of these dependent claims, without regard to the further patentable limitations recited therein.

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The 35 U.S.C. § 103 rejection of claims 1-3, 6-10 and 13-16 based on the combination of *Kurimoto* and *Walter* must, therefore, be reversed.

The rejection of claims 4, 5, 11 and 12 under 35 U.S.C. §103 based upon the proposed combination of the *Kurimoto*, *Walter* and *Shalit* references must be withdrawn.

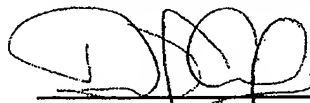
As already explained, the base combination of *Kurimoto* and *Walter* cannot be made. Even if it could, it does not include the elements that the Examiner contends would be in the combination. The proposed addition of the *Shalit* reference does not remedy the defects in the base combination and there is no *prima facie* case of obviousness. The rejection of claims 4, 5, 11 and 12 must be reversed.

CONCLUSION

There is no *prima facie* case of obviousness. The proposed combination cannot be made because it changes the principle of operation of the *Kurimoto* reference. Moreover, there are elements in Appellants' claims that cannot be found in the references as suggested by the Examiner. The references do not teach the combination of a door mover and an interlock such that an elevator car door and a hoistway door move together with the door mover and interlock being near a lower edge of the doors. Appellant's claimed arrangement represents a significant departure from the typical approach of positioning a door mover and interlock near an upper edge of an elevator car door. The rejections must be reversed.

Respectfully submitted,

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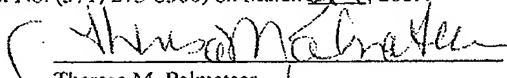
Date

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CERTIFICATE OF FACSIMILE

I hereby certify that this Appeal Brief, relative to Application Serial No. 10,577,871, is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on March 24, 2009.


Theresa M. Palmateer

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1. An elevator car assembly, comprising
a frame;
at least one cabin door supported for guided movement relative to the frame;
a door mover for moving the cabin door between open and closed positions, the door mover being supported by the frame near a lower edge of the cabin door; and
an interlock for simultaneously moving a corresponding hoistway entrance door with the cabin door, the interlock being positioned near the lower edge of the cabin door.
2. The assembly of claim 1, including a sill member beneath the cabin door and wherein the door mover and the interlock are supported beneath the sill.
3. The assembly of claim 2, wherein the sill member is located beneath the cabin door and supported by the frame at least partially in a plane containing the cabin door.
4. The assembly of claim 3, wherein the sill member includes a groove that receives a portion of the cabin door to guide movement of the lower portion of the cabin door as the cabin door moves between the open and closed positions.
5. The assembly of claim 4, wherein the portion of the cabin door extends through the groove in the sill member and the mover is coupled with the portion of the cabin door such that the mover selectively moves the cabin door.
6. The assembly of claim 1, wherein the door mover is supported beneath the cabin door.
7. The assembly of claim 1, wherein the interlock is supported beneath the cabin door.

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8. An elevator door assembly, comprising:
- a car frame having a rail and a sill;
 - at least one car door supported for movement along the rail and the sill between an open and a closed position;
 - a door mover supported near a lower edge of the car door;
 - an entrance door frame having a header and a sill that are adapted to be supported in a fixed position near an opening to a hoistway;
 - at least one hoistway door supported for movement relative to the header and door frame sill between open and closed positions; and
 - an interlock that couples the car door to the hoistway door such that the car door and the hoistway door move together responsive to the door mover, the interlock being supported near the door mover.
9. The assembly of claim 8, including a sill member beneath the car door and wherein the car door mover and the interlock are supported beneath the sill.
10. The assembly of claim 9, wherein the sill member is located beneath the car door and supported by the car frame at least partially in a plane containing the car door.
11. The assembly of claim 10, wherein the sill member includes a groove that receives a portion of the car door to guide movement of the lower portion of the car door as the car door moves between the open and closed positions.
12. The assembly of claim 11, wherein the portion of the car door extends through the groove in the sill member and the mover is coupled with the extending car door portion such that the mover selectively moves the car door.
13. The assembly of claim 8, wherein the car door mover is supported beneath the car door.
14. The assembly of claim 8, wherein the interlock is supported beneath the car door.

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15. The elevator door assembly of claim 8, wherein the door mover is closer to the lower edge of the car door than an upper edge of the car door.

16. The elevator car assembly of claim 1, wherein the door mover is closer to the lower edge of the cabin door than an upper edge of the cabin door.

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EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.